

Amendments to the Claims

Kindly replace all prior listing of claims with the present listing of claims.

1. (currently amended) A method for providing location-based event service comprising the steps of:

- a) obtaining information, either from a cache operable to store information indicating locations of a plurality of mobile users or querying at least one mobile positioning server, indicating a current location of a plurality of mobile users including a selected mobile user;
- b) determining if at least one condition requiring the plurality of mobile users is satisfied based on the indicated current location of the selected mobile user;
- c) performing at least one event, if when the at least one condition is satisfied; and
- d) calculating an event time and waiting until the event time has elapsed before repeating steps a) - c) when the at least one condition is not satisfied, wherein the calculation of the event time is based on the selected mobile user, wherein the selection of the selected mobile user is based on the selected mobile user being the least likely mobile user from among the plurality of mobile users to satisfy the condition.

2. (cancelled)

3. (currently amended) The method of claim 1, wherein the step of ~~determining~~ calculating the event time based on the selected mobile user comprises the steps of:

estimating a time at which the selected mobile user is likely to satisfy a condition based

on at least one of: a distance from a current location of the selected mobile user to a region relevant to the condition, and a velocity of the selected mobile user; and

calculating the event time based on the estimated time at which the selected mobile user contributes least to traffic overhead on a mobile network.

4. (currently amended) The method of claim 3, wherein the obtaining step comprises the steps of:

searching the cache operable to store information indicating locations of a plurality of mobile users for information indicating a location of the selected mobile user;

using the information indicating the location of the selected mobile user as the information indicating the current location of the selected mobile user, if when the information indicating the location of the selected mobile user is found in the cache; and

querying at least one mobile positioning server to obtain the information indicating the current location of the selected mobile user, if when the information indicating the location of the selected mobile user is not found in the cache.

5. (original) The method of claim 4, wherein the at least one event comprises transmitting a message.

6. (original) The method of claim 5, wherein the message is transmitted to a mobile user.

7. (original) The method of claim 5, wherein the message is transmitted to a non-mobile

user.

8. (cancelled)

9. (cancelled)

10. (currently amended) The method of claim 4, wherein the contribution to the traffic overhead on [[a]] the mobile network relates to the locations of the plurality of mobile users and to a time.

11. (currently amended) A system for providing location-based event service comprising: a processor operable to execute computer program instructions; and a memory operable to store computer program instructions executable by the processor, for performing the steps of:

- a) obtaining information, either from a cache operable to store information indicating locations of a plurality of mobile users or querying at least one mobile positioning server, indicating a current location of a plurality of mobile users including a selected mobile user;
- b) determining if at least one condition requiring the plurality of mobile users is satisfied based on the indicated current location of the selected mobile user;
- c) performing at least one event, ~~if~~ when the at least one condition is satisfied; and
- d) calculating an event time and waiting until the event time has elapsed before repeating steps a) - c) when the at least one condition is not satisfied, wherein the calculation of the event time interval-to-wait is based on the selected mobile user, wherein the selection of the selected mobile user is based on the selected mobile user being the least likely mobile user from among the plurality of mobile users to satisfy the condition.

12. (cancelled)

13. (currently amended) The system of claim 11, wherein the step of calculating the time based on the selected mobile user comprises the steps of:

estimating a time at which the selected mobile user is likely to satisfy a condition based

on at least one of: a distance from a current location of the selected mobile user to a region relevant to the condition, and a velocity of the selected mobile user; and

calculating the event time based on the estimated time at which the selected mobile user contributes least to traffic overhead on a mobile network.

14. (currently amended) The system of claim 13, wherein the obtaining step comprises the steps of:

searching the cache operable to store information indicating locations of a plurality of mobile users for information indicating a location of the selected mobile user;

using the information indicating the location of the selected mobile user as the information indicating the current location of the selected mobile user, ~~if~~ when the information indicating the location of the selected mobile user is found in the cache; and

querying at least one mobile positioning server to obtain the information indicating the current location of the selected mobile user, ~~if~~ when the information indicating the location of the selected mobile user is not found in the cache.

15. (original) The system of claim 14, wherein the at least one event comprises transmitting a message.

16. (original) The system of claim 15, wherein the message is transmitted to a mobile user.

17. (original) The system of claim 15, wherein the message is transmitted to a non-mobile

user.

18. (cancelled)

19. (cancelled)

20. (currently amended) The method of claim 14, wherein the contribution to the traffic overhead on [[a]] the mobile network relates to the locations of the plurality of mobile users and to a time.

21. (currently amended) A computer program product for providing location-based event service comprising:

a computer readable storage medium;

computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of

a) obtaining information, either from a cache operable to store information indicating locations of a plurality of mobile users or querying at least one mobile positioning server, indicating a current location of a plurality of mobile users including a selected mobile user;

b) determining if at least one condition requiring the plurality of mobile users is satisfied based on the indicated current location of the selected mobile user;

c) performing at least one event, ~~if~~ when the at least one condition is satisfied; and

d) calculating an event time and waiting until the event time has elapsed before repeating steps a) - c) when the at least one condition is not satisfied, wherein the calculation of the event time is based on the selected mobile user, wherein the selection of the selected mobile user is based on the selected mobile user being the least likely mobile user from among the plurality of mobile users to satisfy the condition.

22. (cancelled)

23. (currently amended) The computer program product of claim 21, wherein the step of calculating the event time based on the selected mobile user comprises the steps of:

estimating a time at which the selected mobile user is likely to satisfy a condition based on at least one of: a distance from a current location of the selected mobile user to a region relevant to the condition, and a velocity of the selected mobile user; and

calculating the event time based on the estimated time at which the selected mobile user contributes least to traffic overhead on a mobile network.

24. (currently amended) The computer program product of claim 23, wherein the obtaining step comprises the steps of:

searching the cache operable to store information indicating locations of a plurality of mobile users for information indicating a location of the selected mobile user;

using the information indicating the location of the selected mobile user as the information indicating the current location of the selected mobile user, ~~if~~ when the information indicating the location of the selected mobile user is found in the cache; and

querying at least one mobile positioning server to obtain the information indicating the current location of the selected mobile user, ~~if~~ when the information indicating the location of the selected mobile user is not found in the cache.

25. (original) The computer program product of claim 24, wherein the at least one event comprises transmitting a message.

26. (original) The computer program product of claim 25, wherein the message is transmitted to a mobile user.

27. (original) The computer program product of claim 25, wherein the message is transmitted to a non-mobile user.

28. (cancelled)

29. (cancelled)

30. (currently amended) The method of claim 24, wherein contribution to the traffic overhead on [[a]] the mobile network relates to the locations of the plurality of mobile users and to a time.